



CAYM Education Trust's

# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph:02114-661992

Email:siddhantical@gmail.com Website: www.siddhantica.in

## TRAINING NOTICE

Date: 1<sup>st</sup> November 2021

MCA students are hereby informed that starting from 8<sup>th</sup> November 2021 to 12 November 2021 every day till successful delivery of course content, between 2.30 pm and 4.30pm there will be ONLINE training on DS Brush up training. All students are requested to keep necessary technical set up ready at their end.

Training Cell Coordinator  
Prof. Reshma Jadhav



Director  
SICA

Director

Siddhant Institute of Computer Application  
Sudumbare Maval Pune - 412109



CAYM Education Trust's

# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph: 02114-661992

Email: siddhantical@gmail.com Website: www.siddhantica.in

A.Y. 2020-21

## DS Brush up training

Date- 8<sup>th</sup> November 2021 to 12 November 2021

Time- 2.30 pm to 4.30 pm

Venue- Zoom platform

Speaker – Mrs. Reshma Mavkar

Hands-on ONLINE training sessions on DS Brush up training were organized by the training cell of the institute for MCA students. These sessions were conducted every day in the second half. During these highly interactive sessions, following topics were covered by the trainer:

**What is Data Structure:**

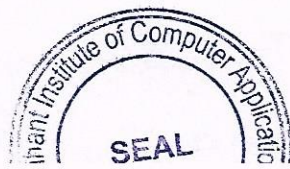
*A data structure is a storage that is used to store and organize data. It is a way of arranging data on a computer so that it can be accessed and updated efficiently.*

A data structure is not only used for organizing the data. It is also used for processing, retrieving, and storing data. There are different basic and advanced types of data structures that are used in almost every program or software system that has been developed. So we must have good knowledge of data structures.

**Data structures** are an integral part of computers used for the arrangement of data in memory. They are essential and responsible for organizing, processing, accessing, and storing data efficiently. But this is not all. Various types of data structures have their own characteristics, features, applications, advantages, and disadvantages. So how do you identify a data structure that is suitable for a particular task? What is meant by the term 'Data Structure'? How many types of data structures are there and what are they used for?

**Arrays:**

An array is a linear data structure and it is a collection of items stored at contiguous memory locations. The idea is to store multiple items of the same type together in one place. It allows the processing of a large amount of data in a relatively short period. The first element of the array is indexed by a subscript of 0. There are different operations possible in an array, like Searching, Sorting, Inserting, Traversing, Reversing, and Deleting.





CAYM Education Trust's

# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph: 02114-661992

Email: siddhantical@gmail.com Website: www.siddhantica.in

## Memory Location

200	201	202	203	204	205	206	▪	▪	▪
U	B	F	D	A	E	C	▪	▪	▪
0	1	2	3	4	5	6	▪	▪	▪

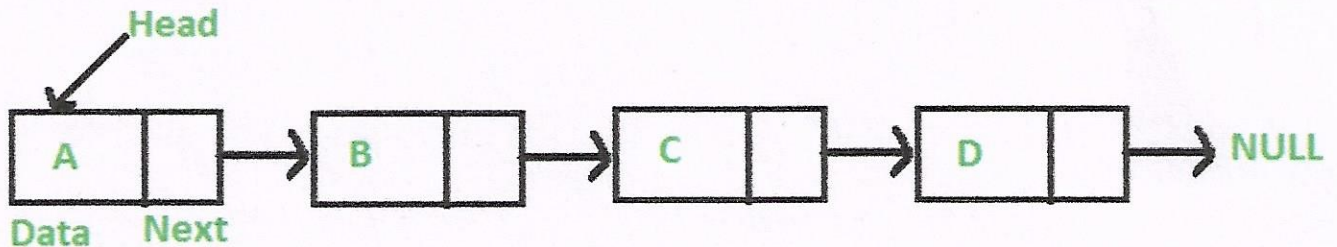
Index

Linked list:

A linked list is a linear data structure in which elements are not stored at contiguous memory locations. The elements in a linked list are linked using pointers as shown in the below image:

Types of linked lists:

- Singly-linked list
- Doubly linked list
- Circular linked list
- Doubly circular linked list



Linked List

## Static and Dynamic data structures

In the Static data structure, the size of the structure is fixed. The content of the data structure can be modified without changing the memory space allocated to it.





CAYM Education Trust's

# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph:02114-661992

Email:siddhantical@gmail.com Website: www.siddhantica.in

40	55	63	17	22	68	89	97	89
0	1	2	3	4	5	6	7	8

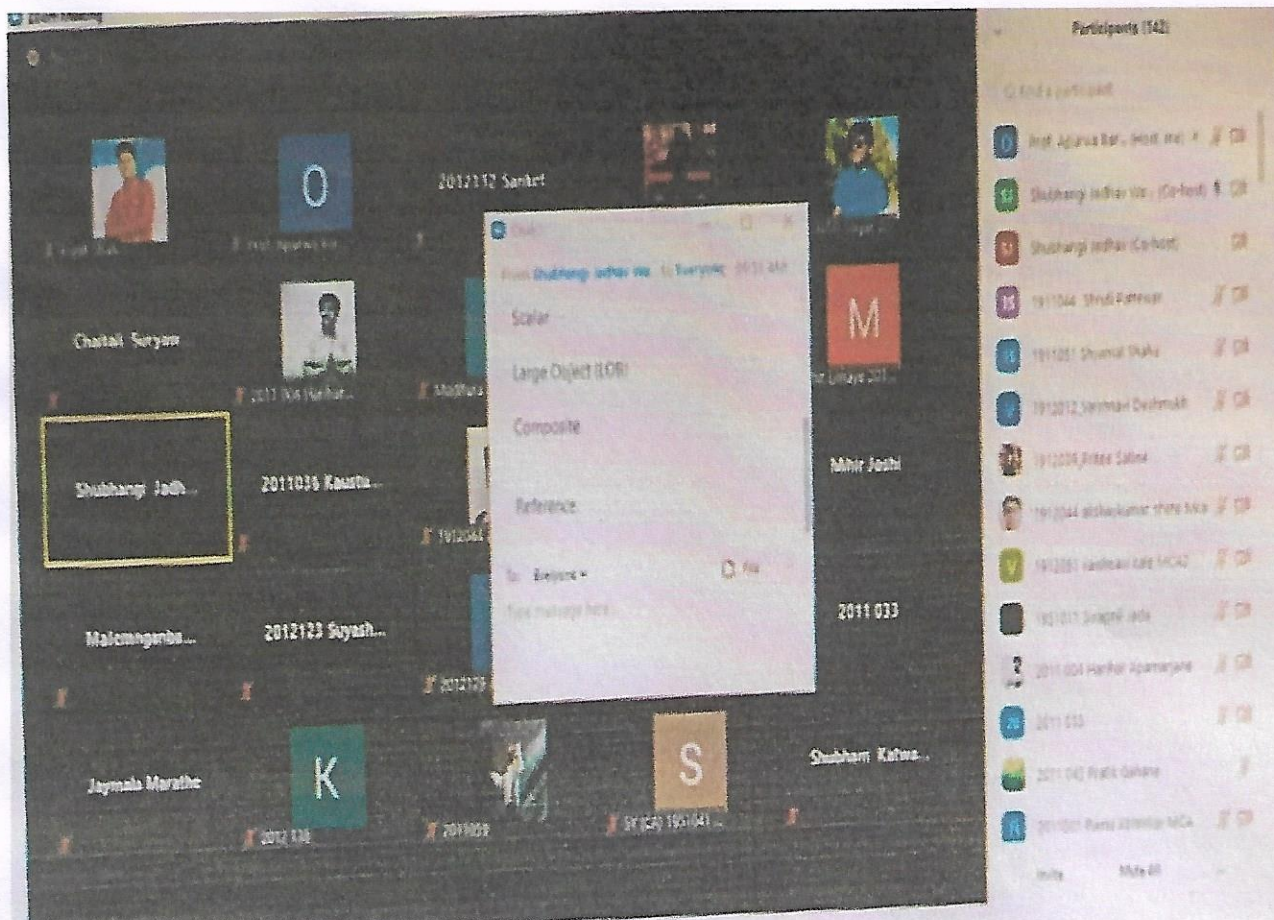
<- Array Indices

Array Length = 9

First Index = 0

Last Index = 8

## Photographs





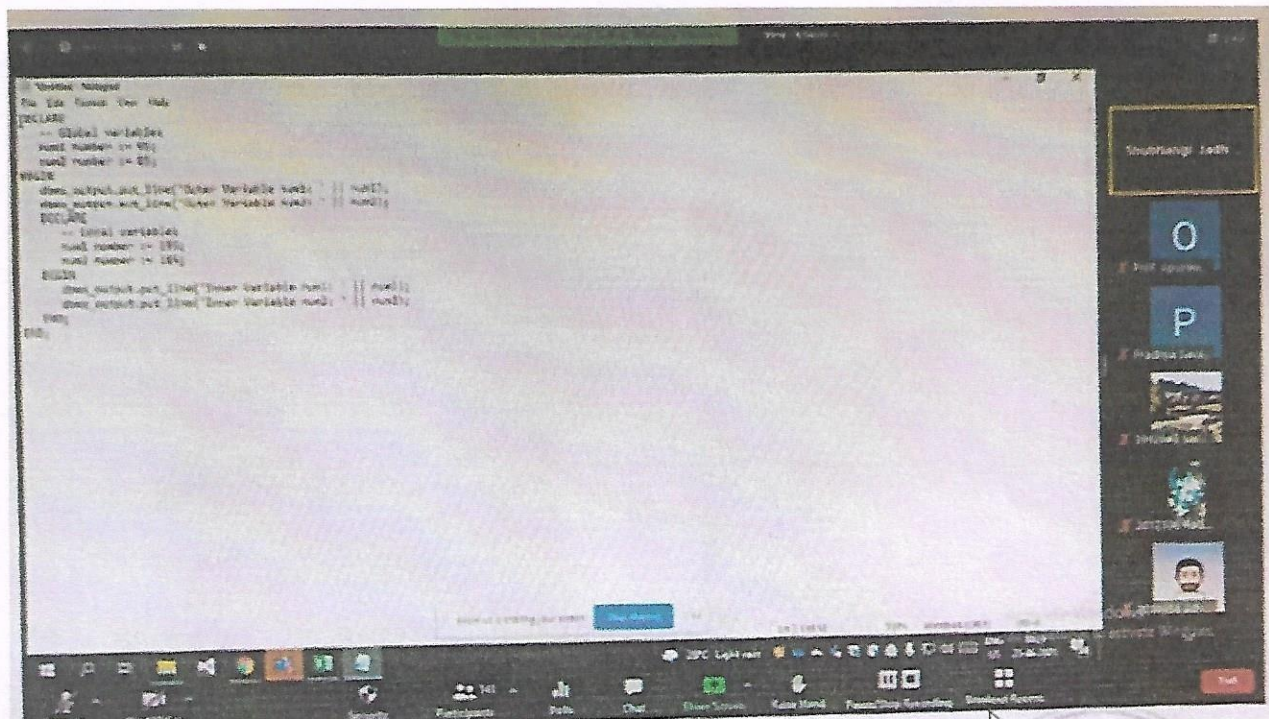
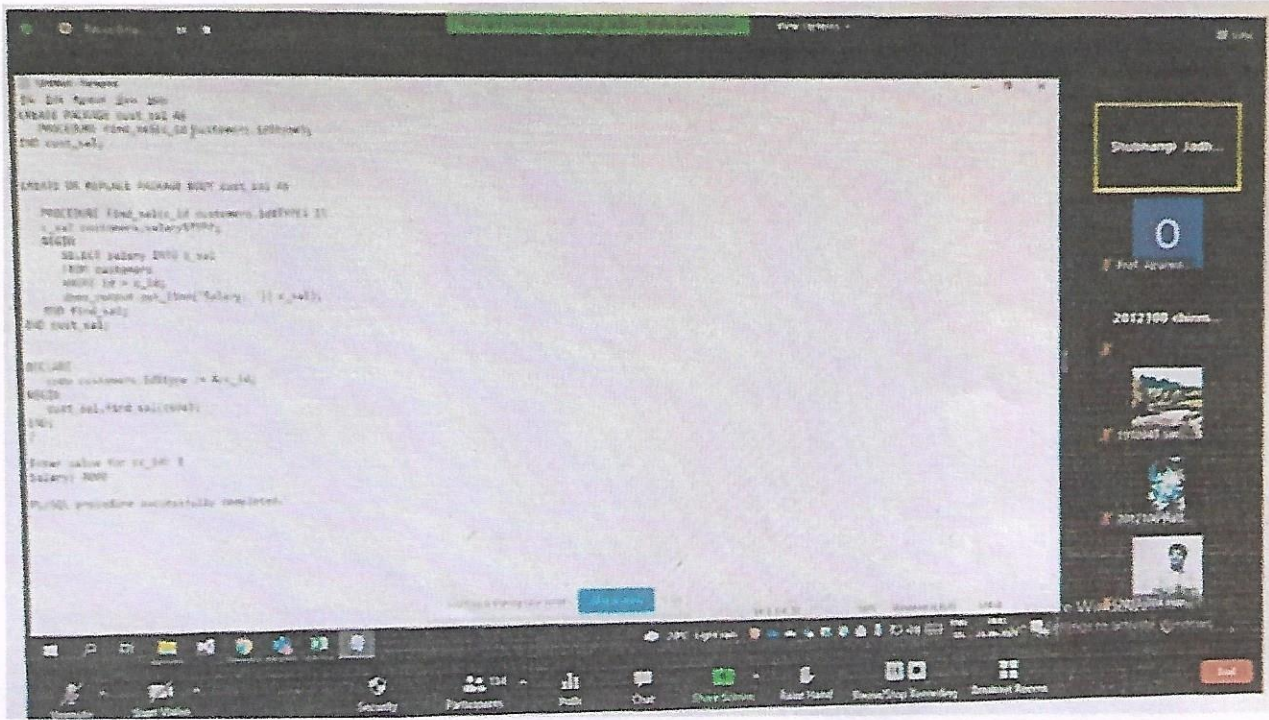
CAYM Education Trust's

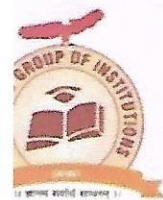
# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph:02114-661992

Email:siddhantical@gmail.com Website: www.siddhantica.in





CAYM Education Trust's

# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph:02114-661992

Email:siddhantical@gmail.com Website: www.siddhantica.in

## DS Brush up training Attendance Sheet

Sr. No.	Student Name	08-Nov	09-Nov	10-Nov	11-Nov	12-Nov
1	ABHISHEK AMOL CHIDRAWAR	P	P	P	P	P
2	AKSHAY BABURAO DASHRATHE	P	P	P	P	P
3	AKSHAY PRESHIT PATIL	P	P	P	P	P
4	ANKIT SANJAY SINGH	AB	AB	AB	AB	P
5	ANNADATE MANSI VIJAY	P	P	P	P	P
6	ATTARDE CHAITANYA KIRAN	P	P	P	P	P
7	BARURE PUNDLIK BALAJI	P	P	P	P	P
8	BHAGAT NEERAJKUMAR KIRIT	AB	P	AB	AB	AB
9	BHAWARAY MANISH VIJAYDATT	AB	P	AB	AB	AB
10	BONDE RUSHIKESH PRAKASH	P	P	P	P	P
11	CHOPADE VAIBHAV SANJAY	P	AB	AB	P	P
12	CHOUHARY BHAVESH KANARAM	P	AB	AB	AB	AB
13	DENKAR RESHMA BALIRAM	P	P	P	AB	AB
14	DHARPAL ARNAV NARENDRA	AB	AB	AB	AB	P
15	GHADGE VAIBHAV DILIP	AB	AB	P	P	P
16	GHOLAP CHETANA KHANDU	AB	AB	P	P	AB
17	GUNJAL POOJA RAJENDRA	P	P	P	P	P
18	HULE NIRANJAN DATTATRAY	P	P	P	P	P
19	HURDALE SHAILESH RAVISHANKAR	AB	AB	AB	AB	AB
20	JADHAV SANKET DATTATRAYA	P	P	P	P	P
21	KADAM POONAM SUBHASH	AB	AB	AB	AB	AB
22	KALASKAR NIKHIL KALASKAR	P	P	P	P	P
23	KAMBLE ADITYA GAUTAM	AB	AB	AB	AB	AB
24	KSHIRSAGAR GANESH SHRINIVAS	P	P	P	P	P
25	MAGAR DIPALI ASHOK	AB	AB	AB	AB	AB
26	MALGHE VAIBHAVI SAHEBRAO	P	P	P	P	P
27	MANKAR VAIBHAV SANJAY	AB	AB	AB	AB	AB
28	MONIKA KUMARI	P	P	P	P	P
29	NERKAR PRIYANKA ISHWARLAL	P	P	P	P	P
30	NIKITA PRADIP KADAM	P	P	P	P	P
31	NILESH SUBHASH RANGARI	P	P	P	P	P
32	NITA SURESH GORADE	P	P	P	P	P





CAYM Education Trust's

# SIDDHANT INSTITUTE OF COMPUTER APPLICATION

(Approved by AICTE New Delhi, Government of Maharashtra Recognised Savitribai Phule Pune University)

Add: At post-Sudumbare, Tal-Maval, Dist-Pune-412109, Ph: 02114-661992

Email: siddhantical@gmail.com Website: www.siddhantica.in

33	PALAYE RUTUJA ASHISH	P	P	P	P	P
34	PALNE SAGAR SANJAY	P	P	P	P	P
35	PATIL BHUSHAN SUNIL	P	P	P	P	P
36	PATIL SANKET KHUSHAL	AB	AB	AB	AB	AB
37	PRATIK BALASAHEB GAIKWAD	P	P	P	P	P
38	PUND SANKET RAJENDRA	P	P	P	P	P
39	RANUBA SHAMRAO IRKAR	AB	AB	AB	AB	AB
40	ROHINI UDHAV BHARTI	P	P	P	P	P
41	SAHANI SHIVAM VIJAY	P	P	P	P	P
42	SAKPAL PALLAVI SUBHASH	AB	AB	AB	AB	AB
43	SAMAL RAHUL SUNIL	P	P	P	P	P
44	SAMRUDDHI ANILRAO DAMBHARE	AB	AB	AB	AB	AB
45	SHAIKH ALTAF BADSHAHA	P	P	P	P	P
46	SHAIKH FARZANA BABA	P	P	P	P	P
47	SHAIKH SHOAB RAHIM	P	P	P	P	P
48	SHINDE AAKANKASHA MANGESHKUMAR	P	P	P	P	P
49	SHUBHAM RAMKISAN JOSHI	P	P	P	P	P
50	SHWETA JHA	AB	AB	AB	AB	AB
51	SONARE POOJA RAJU INDU	AB	AB	AB	AB	AB
52	SOURABH DNYANDEV NAGARE	P	P	P	P	P
53	SUHAS SUBHASH KADAM	AB	AB	AB	AB	AB
54	SYED ATHER AHMAD SYED RAHEEM	P	P	P	P	P
55	TALEKAR KOMAL BALIRAM	P	P	P	P	P
56	THOMBARE BHUVNESHWARI YUVRAJ	P	P	P	P	P
57	VAIBHAV MACHINDRA BARNE	AB	AB	AB	AB	AB
58	VERMA NEERAJ MOHANLAL	P	P	P	P	P
59	WADEKAR ABHISHEK NAVNATH	P	P	P	P	P
60	WADEKAR AJIT SANJAY	P	P	P	P	P
61	YASH SHUKLA	P	P	P	P	P
62	YEWATKAR ASHWINI VISHAL	AB	AB	AB	AB	AB

*Reshma*

Training Cell Coordinator  
Prof. Reshma Jadhav



*G. S. Jadhav*  
Director

SICA  
Director

Siddhant Institute of Computer Application  
Sudumbare, Maval, Pune - 412109,